

**Reliable.  
Efficient.  
Versatile.**

Providing quality hydraulic valves  
and individualized services.





**HIGH QUALITY  
PRODUCT**



**OPTIMIZED  
DESIGN**



**+30 YEARS OF  
EXPERIENCE**



**PROFESSIONAL  
MANAGEMENT**



**INTERNATIONAL  
STANDARD**



**TRUSTED PARTNER  
FROM 1000+ CLIENTS**

# About RIS Valves

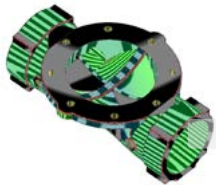


RIS Valves is the hydraulic control valve design and manufacturing division of RIS Iberia (*IREX Group, Irrigation Excellence*). With the aim of promoting and making automated irrigation with the use of hydraulic valves more accessible, we market our range of control valves with an attractive design.

RIS valves are a highly versatile product capable of working in the most adverse situations. They can be used in the automation of water pipes for irrigation and industrial processes.

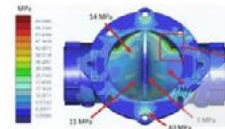


# Design Process



## CAD DESIGN

- Parts Design
- Assembly Design
- Interference Analysis



## FEM SIMULATION

- Static and dynamic study
- Fatigue Study
- University Collaboration



## SAMPLING MANUFACTURING

- 3D Printed parts
- Small batch manufacturing
- Internal samples validation
- Cycled and field test



## PRODUCTION MANUFACTURING

- Large batch production
- Material reception
- Quality check...

# Quality System

Whole process  
certified by  
ISO 9001



## MATERIAL RECEPTION



- Identification
- Quality checking
- Measurement / Geometries \*\*
- Static / Dynamic / High Pressure Test \*\*
- Batch Identification (Tractability Code)

## ASSEMBLY LINE



- Component picking
- Torque test \*\*
- Assembly high pressure test \*\*
- Assembly batch code identification

## STORAGE



- Warehouse slot
- Finished material batch code
- Crates and Pallet identification

## ORDER DISPATCH

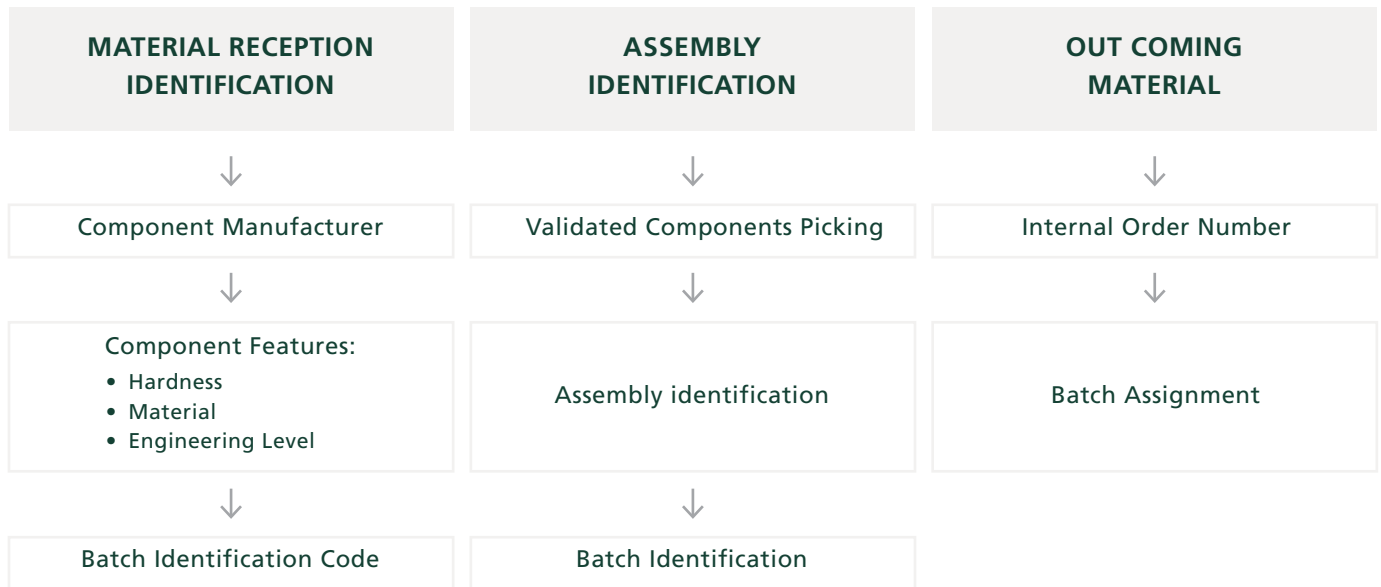
- Finished product picking
- Goods checking
- Shipping arrangement

WORK ORDER

CUSTOM ORDER

\*\* Measurement equipment externally calibrated and internally verified

# Traceability System: 3 Levels



# Quality Tests



## RIS TEST JIG

PN 16 35m<sup>3</sup>/h

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- ISO 9001
- DURABILITY TEST
- DIAPHRAGM PERFORMANCE (STRESS TEST)

- OPEN – CLOSURE AT HIGH FREQUENCY
- STATIC PRESSURE TESTS
- REGULATING PERFORMANCE
- QUALITY CHECKS RECORDS

## EXTERNAL VALIDATION BENCH

PN 16 200m<sup>3</sup>/h

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- ISO 9635
- Kv
- HEAD LOSS
- OPENING PRESSURE

- OPEN – CLOSE TIMING
- REGULATION PERFORMANCE
  - Every new product
  - Every design modification
  - In case of supplier or component change

# Basic plastic and metal valves

**Plastic  
Threaded**

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**Plastic  
Victaulic**

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**Plastic  
Flanged**

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**Control  
Kits**

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**Solenoids**

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### Metal Threaded

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### Metal Victaulic

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### Metal Flanged

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### Metal Flanged 90°

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### Pressure Regulating Pilots

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### Backwashing Valves

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# Plastic Valve Threaded - Victaulic

## MODELS:

1 ½", 2", 2"½", 3", 4"



## WORKING PRESSURE

| 1,5 a 4" | Diaphragm BP | Diaphragm MP  |
|----------|--------------|---------------|
|          | 0,5 to 3 bar | 0,8 to 10 bar |

## COMMON FUNCTIONS

Solenoid Valve  
Level control  
Pressure reducing  
Flow control  
Pressure sustaining  
Security Valve

## ADVANTAGES

Low Pressure losses.  
Easy maintenance.  
Quick opening and closing time.  
High Kv. Optimized design.

## TECHNICAL FEATURES

### Material body and cover:

Glass fiber reinforced polyamide  
(PA+GF)

**Diaphragm:** Natural rubber (NR)  
reinforced with Nylon (EPDM,  
VITON optional)

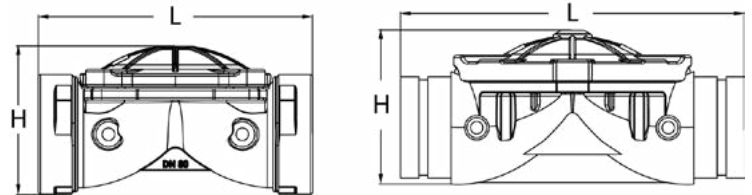
**Spring:** Stainless steel AISI 304

**Screws:** Screws, washers and nuts -  
Stainless steel AISI 304

### Working Pressure:

Low pressure diaphragm: 0,5 to 3 bar

Standard Diaphragm: 0,8 to 10 bar



| Size         | Kv  | L (mm) | H (mm) | Weight (kg) |
|--------------|-----|--------|--------|-------------|
| 1 ½" Thread  | 49  | 198    | 110    | 0,93        |
| 2" Thread    | 50  | 198    | 110    | 0,98        |
| 2 ½" Thread  | 53  | 237    | 117    | 1,07        |
| 3" Thread    | 97  | 284    | 127    | 1,85        |
| 4" Thread    | 185 | 375,5  | 178    | 4,00        |
| 3" Victaulic | 97  | 302    | 127    | 2,10        |
| 4" Victaulic | 185 | 375,5  | 178    | 4,30        |

## HEAD LOSSES (M.W.C.) ACCORDING TO MODEL AND FLOW

| Flow<br>m³/h | 5    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   | 60   | 70   | 80   | 90   | 100  | 120  | 140  | 160  |
|--------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 ½"         | 0,10 | 0,42 | 0,94 | 1,67 | 2,60 | 3,75 | 5,10 |      |      |      |      |      |      |      |      |      |      |      |
| 2"           | 0,10 | 0,40 | 0,90 | 1,60 | 2,50 | 3,60 | 4,90 |      |      |      |      |      |      |      |      |      |      |      |
| 2 ½"         |      | 0,36 | 0,80 | 1,42 | 2,22 | 3,20 | 4,36 | 5,70 | 7,21 |      |      |      |      |      |      |      |      |      |
| 3"           |      |      | 0,24 | 0,43 | 0,66 | 0,96 | 1,30 | 1,70 | 2,15 | 2,66 | 3,83 | 5,21 | 6,80 | 8,61 |      |      |      |      |
| 4"           |      |      |      | 0,12 | 0,18 | 0,26 | 0,36 | 0,47 | 0,59 | 0,73 | 1,05 | 1,43 | 1,87 | 2,37 | 2,92 | 4,21 | 5,73 | 7,48 |

Same head losses for threaded and Victaulic valves

# Plastic Valve Flanged

## MODELS:

3", 4"



## WORKING PRESSURE

| DN80<br>to DN100 | Diaphragm BP | Diaphragm MP  |
|------------------|--------------|---------------|
|                  | 0,5 to 3 bar | 0,8 to 10 bar |

## COMMON FUNCTIONS

Solenoid Valve  
Level control  
Pressure reducing  
Flow control  
Pressure sustaining  
Security Valve

## ADVANTAGES

Low Pressure losses.  
Easy maintenance.  
Quick opening and closing time.  
High Kv. Optimized design.

## TECHNICAL FEATURES

### Material body and cover:

Glass fiber reinforced polyamide (PA+GF)

**Diaphragm:** Natural rubber (NR) reinforced with Nylon (EPDM, VITON optional)

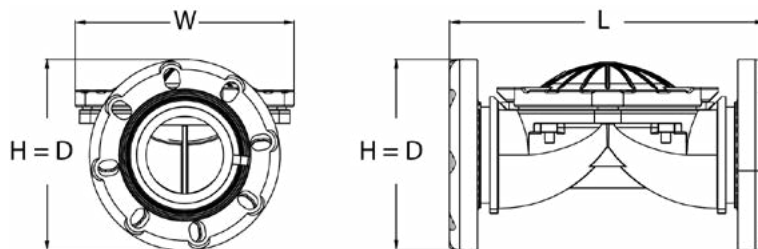
**Spring:** Stainless steel AISI 304

**Screws:** Screws, washers and nuts - Stainless steel AISI 304

### Working Pressure:

Low pressure diaphragm: 0,5 to 3 bar

Standard Diaphragm: 0,8 to 10 bar



| Size       | Kv  | L (mm) | W (mm) | D (mm) | H (mm) | Weight (kg) |
|------------|-----|--------|--------|--------|--------|-------------|
| 3" Flanged | 97  | 302    | 222,6  | 200    | 200    | 3,30        |
| 4" Flanged | 185 | 375,5  | 260,5  | 220    | 220    | 6,33        |

## HEAD LOSSES (M.W.C.) ACCORDING TO MODEL AND FLOW

| Flow m³/h | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 50   | 60   | 70   | 80   | 90   | 100   | 120  | 140  | 160  | 180  | 200   |
|-----------|------|------|------|------|------|------|------|------|------|------|------|------|-------|------|------|------|------|-------|
| 3"        | 0,11 | 0,24 | 0,43 | 0,66 | 0,96 | 1,30 | 1,07 | 2,66 | 3,83 | 5,21 | 6,80 | 8,61 | 10,63 |      |      |      |      |       |
| 4"        |      |      | 0,12 | 0,18 | 0,26 | 0,36 | 0,47 | 0,73 | 1,05 | 1,43 | 1,87 | 2,37 | 2,92  | 4,21 | 5,73 | 7,42 | 9,47 | 11,69 |

# Metal Valve Threaded - Victaulic

## MODELS:

1 ½", 2", 2"½", 3", 3"x2x3", 4"



## WORKING PRESSURE

| 1,5" to 3" | LP Diaphragm | MP Diaphragm       | AP Diaphragm  |
|------------|--------------|--------------------|---------------|
|            | 0,5 to 3 bar | 0,8 to 10 bar      | 1,5 to 16 bar |
| 4"         | LP Diaphragm | Standard Diaphragm |               |
|            | 0,5 to 3 bar | 1,5 to 16 bar      |               |

## COMMON FUNCTIONS

Solenoid Valve  
Level control  
Pressure reducing  
Flow control  
Pressure sustaining  
Security Valve

## ADVANTAGES

Low Pressure losses.  
Easy maintenance.  
Quick opening and closing time.  
High Kv. Optimized design.

## TECHNICAL FEATURES

### Material body and cover:

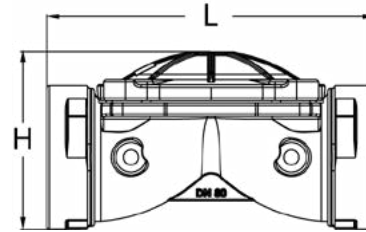
Grey cast iron (Ductile optional)

**Paint:** Polyester powder.

**Diaphragm:** Natural rubber (NR) reinforced with Nylon (EPDM, VITON optional)

**Spring:** Stainless steel AISI 304

**Screws:** Screws, washers and nuts - Stainless steel AISI 304



| Size         | Kv  | L (mm) | H (mm) | Weight (kg) |
|--------------|-----|--------|--------|-------------|
| 1 ½" Thread  | 45  | 185    | 93     | 3,5         |
| 2" Thread    | 52  | 185    | 93     | 3,6         |
| 2 ½" Thread  | 54  | 195    | 93     | 4,4         |
| 3" Thread    | 112 | 242    | 124    | 6,7         |
| 4" Thread    | 217 | 294    | 193    | 10,9        |
| 3"Vx2x3"V    | 54  | 195    | 93     | 4,0         |
| 3" Victaulic | 112 | 242    | 124    | 6,1         |
| 4" Victaulic | 217 | 294    | 153    | 9,9         |

## HEAD LOSSES (M.W.C.) ACCORDING TO MODEL AND FLOW

| Q m³/h | 5    | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   | 50   | 60   | 70   | 80   | 90   | 100  | 120  | 140  | 160  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 ½"   | 0,12 | 0,49 | 1,11 | 1,98 | 3,09 | 4,44 | 6,05 |      |      |      |      |      |      |      |      |      |      |      |
| 2"     | 0,09 | 0,37 | 0,83 | 1,48 | 2,31 | 3,33 | 4,53 | 5,92 |      |      |      |      |      |      |      |      |      |      |
| 2 ½"   |      | 0,34 | 0,77 | 1,37 | 2,14 | 3,09 | 4,20 | 5,49 | 6,94 | 8,57 |      |      |      |      |      |      |      |      |
| 3"     |      |      | 0,18 | 0,32 | 0,50 | 0,72 | 0,98 | 1,28 | 1,61 | 1,99 | 2,87 | 3,91 | 5,10 | 6,46 | 7,97 |      |      |      |
| 4"     |      |      |      | 0,08 | 0,13 | 0,19 | 0,26 | 0,34 | 0,43 | 0,53 | 0,76 | 1,04 | 1,36 | 1,72 | 2,12 | 3,06 | 4,16 | 5,44 |

Same head losses for threaded and Victaulic valves

# Metal Valve Flanged

## MODELS:

DIN 2502 PN16: DN 50, 65, 80, 100, 125, 150, 200, 250, 300



### Common functions:

Solenoid Valve, level control valve, pressure reducing, flow control, pressure sustaining, security valve.

## WORKING PRESSURE

| DN50<br>to DN80    | LP Diaphragm | MP Diaphragm       | AP Diaphragm  |
|--------------------|--------------|--------------------|---------------|
|                    | 0,5 to 3 bar | 0,8 to 10 bar      | 1,5 to 16 bar |
| DN 100<br>to DN300 | LP Diaphragm | Standard Diaphragm |               |
|                    | 0,5 to 3 bar | 1,5 to 16 bar      |               |

## TECHNICAL FEATURES

### Material body and cover:

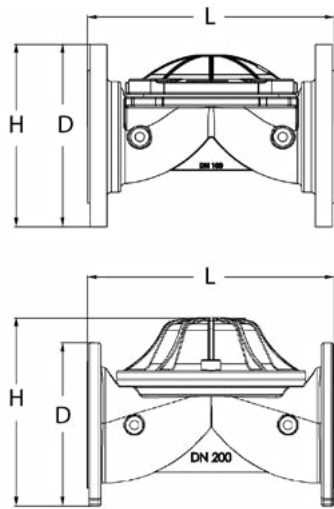
Grey cast iron (Ductile optional)

**Paint:** Polyester powder.

**Diaphragm:** Natural rubber (NR)  
reinforced with Nylon (EPDM,  
VITON optional)

**Spring:** Stainless steel AISI 304

**Screws:** Screws, washers and nuts -  
Stainless steel AISI 304



| Size   | Kv   | L (mm) | D (mm) | H (mm) | Weight (kg) |
|--------|------|--------|--------|--------|-------------|
| DN 50  | 50   | 200    | 165    | 165    | 7,0         |
| DN 65  | 50   | 214    | 185    | 185    | 9,5         |
| DN 80  | 115  | 242    | 200    | 200    | 13          |
| DN 100 | 220  | 294    | 220    | 220    | 20          |
| DN 125 | 222  | 294    | 250    | 250    | 23          |
| DN 150 | 560  | 396    | 285    | 285    | 53          |
| DN 200 | 820  | 520    | 340    | 395    | 86          |
| DN 250 | 832  | 560    | 405    | 429    | 105         |
| DN 300 | 1800 | 605    | 460    | 487,5  | 156         |

## HEAD LOSSES (M.W.C.) ACCORDING TO MODEL AND FLOW

| Q m³/h | 20   | 30   | 40   | 50   | 60    | 70   | 80   | 90   | 100  | 125  | 150  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 1000 | 1200 |
|--------|------|------|------|------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| DN 50  | 1,48 | 3,33 | 5,92 | 9,25 |       |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| DN 65  | 1,37 | 3,09 | 5,49 | 8,57 | 12,35 |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
| DN 80  | 0,30 | 0,68 | 1,21 | 1,89 | 2,72  | 3,71 | 4,84 | 6,12 | 7,56 |      |      |      |      |      |      |      |      |      |      |      |
| DN 100 | 0,08 | 0,19 | 0,33 | 0,52 | 0,74  | 1,01 | 1,32 | 1,67 | 2,07 | 3,23 | 4,65 | 8,26 |      |      |      |      |      |      |      |      |
| DN 125 |      | 0,18 | 0,32 | 0,51 | 0,73  | 0,99 | 1,30 | 1,64 | 2,03 | 3,17 | 4,57 | 8,12 |      |      |      |      |      |      |      |      |
| DN 150 |      |      |      | 0,08 | 0,11  | 0,16 | 0,20 | 0,26 | 0,32 | 0,50 | 0,72 | 1,28 | 2,87 | 5,10 | 7,97 |      |      |      |      |      |
| DN 200 |      |      |      |      |       |      |      |      | 0,15 | 0,23 | 0,33 | 0,59 | 1,34 | 2,38 | 3,72 | 5,35 | 7,29 | 9,52 |      |      |
| DN 250 |      |      |      |      |       |      |      |      | 0,14 | 0,23 | 0,33 | 0,58 | 1,30 | 2,31 | 3,61 | 5,20 | 7,08 | 9,25 |      |      |
| DN 300 |      |      |      |      |       |      |      |      |      |      |      | 0,12 | 0,28 | 0,49 | 0,77 | 1,11 | 1,51 | 1,98 | 3,09 | 4,44 |

# Metal Valve Flanged 90°

## MODELS:

DIN 2502 PN16: DN 80, 100, 125



### WORKING PRESSURE

| DN50<br>to DN80    | LP Diaphragm | MP Diaphragm       | AP Diaphragm  |
|--------------------|--------------|--------------------|---------------|
|                    | 0,5 to 3 bar | 0,8 to 10 bar      | 1,5 to 16 bar |
| DN 100<br>to DN300 | LP Diaphragm | Standard Diaphragm |               |
|                    | 0,5 to 3 bar | 1,5 to 16 bar      |               |

### COMMON FUNCTIONS

Solenoid Valve  
Level control  
Pressure reducing  
Flow control  
Pressure sustaining  
Security Valve

### ADVANTAGES

Low Pressure losses.  
Easy maintenance.  
Quick opening and closing time.  
High Kv. Optimized design.

## TECHNICAL FEATURES

### Material body and cover:

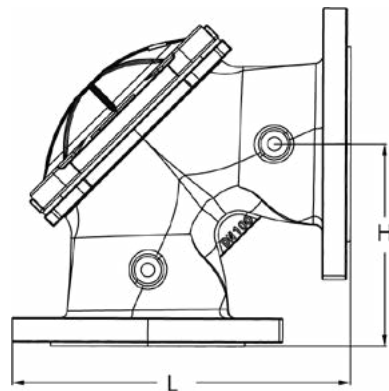
Grey cast iron (Ductile optional)

**Paint:** Polyester powder.

**Diaphragm:** Natural rubber (NR) reinforced with Nylon (EPDM, VITON optional)

**Spring:** Stainless steel AISI 304

**Screws:** Screws, washers and nuts - Stainless steel AISI 304



| Size   | Kv  | L (mm) | H (mm) | Weight (kg) |
|--------|-----|--------|--------|-------------|
| DN 80  | 130 | 250,93 | 149,62 | 16          |
| DN 100 | 240 | 274,78 | 164,78 | 24          |
| DN 125 | 250 | 282,33 | 159,3  | 23          |

## HEAD LOSSES (M.W.C.) ACCORDING TO MODEL AND FLOW

| Q m³/h | 20   | 30   | 40   | 50   | 60   | 70   | 80   | 90   | 100  | 125  | 150  | 200  |
|--------|------|------|------|------|------|------|------|------|------|------|------|------|
| DN 80  | 0,24 | 0,53 | 0,95 | 1,48 | 2,13 | 2,90 | 3,79 | 4,79 | 5,92 | 9,25 |      |      |
| DN 100 |      | 0,16 | 0,28 | 0,43 | 0,63 | 0,85 | 1,11 | 1,41 | 1,74 | 2,71 | 3,91 | 6,94 |
| DN 125 |      |      | 0,26 | 0,40 | 0,58 | 0,78 | 1,02 | 1,30 | 1,60 | 2,50 | 3,60 | 6,40 |

# 3-way Backwashing Valves

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## MODELS:

2", 3", 4"



## COMMON FUNCTIONS

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It can be used as an automatic backwash system in automatic sand or disc filter equipment.

It can also be used as a water supply system, using water supply pipes to redirect the flow at an angle or in a straight line.

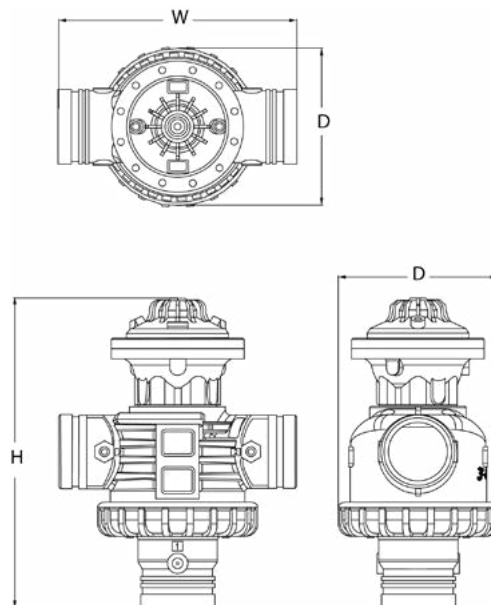
## TECHNICAL FEATURES

Highly resistant plastic with a watertight seal.

Stabilizes flow and prevents clean and dirty water from mixing.

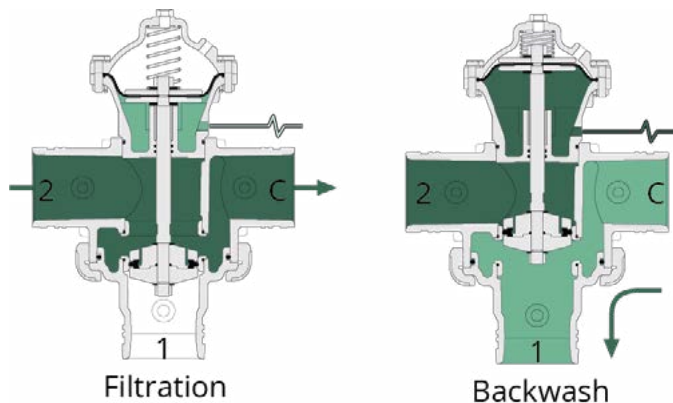
Corrosion-proof, long-lasting polypropylene.

Easy-to-disassemble system for proper maintenance.

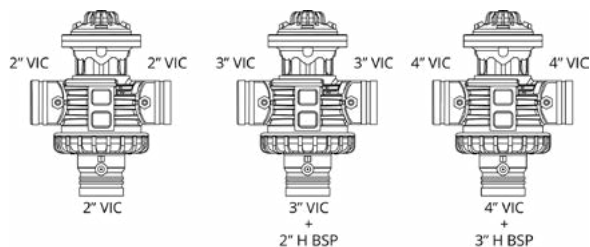
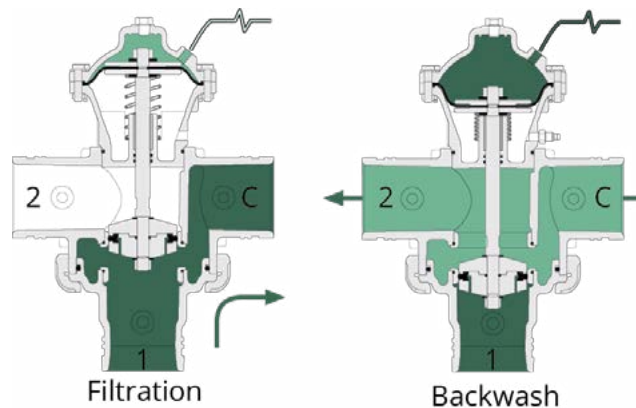


| Size | L (mm) | W (mm) | D (mm) | Weight (kg) |
|------|--------|--------|--------|-------------|
| 2"   | 274    | 180    | 160    | 2,8         |
| 3"   | 378    | 287    | 192    | 5,5         |
| 4"   | 464    | 277    | 260    | 9,9         |

**OPERATION**  
**Straight flow**



**OPERATION**  
**Angle Flow**

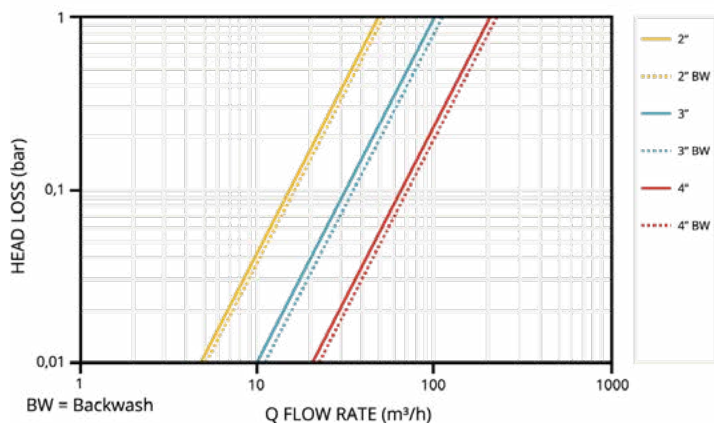


| Model | Connection size           | Connector type | Max. flow (m3/h) | Max. pressure (Bar) |
|-------|---------------------------|----------------|------------------|---------------------|
| 2"    | * 2" x 2" x 2"            | VIC            | 30               | 0,7 - 10            |
| 3"    | * 3" x 3" (2" H BSP) x 3" | VIC            | 50               | 0,7 - 10            |
| 4"    | * 4" x 4" (3" H BSP) x 4" | VIC            | 100              | 0,7 - 10            |

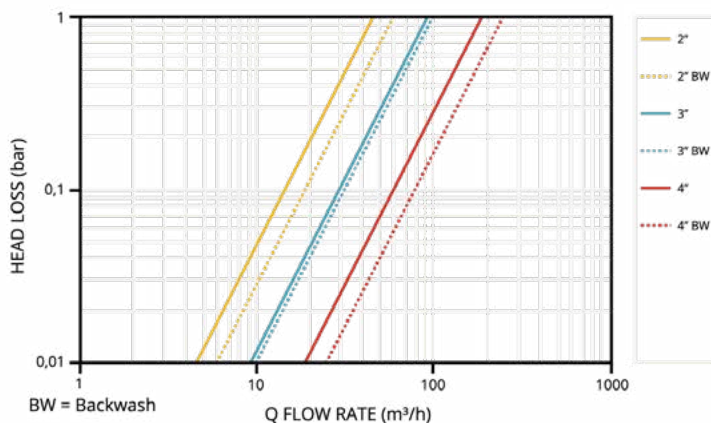
\*Check options with connections (NPT)

|      | Kv (m <sup>3</sup> /h - ΔP [1bar] ) |          |               |          |
|------|-------------------------------------|----------|---------------|----------|
| SIZE | Angle Flow                          |          | Straight Flow |          |
|      | Filtration                          | Backwash | Filtration    | Backwash |
| 2"   | 52                                  | 48       | 46            | 60       |
| 3"   | 110                                 | 100      | 93            | 122      |
| 4"   | 225                                 | 205      | 190           | 250      |

Angle Flow



Straight Flow



# Pressure Reducing Control Valve

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## MODELS:

PLASTIC VALVES 1 ½", 2", 2 ½", 3", 4"

METAL VALVES THREADED 1 ½", 2", 2 ½", 3", 4"

METAL VALVES VICTAULIC 3", 4"

METAL VALVES FLANGED DN80, DN100, DN 125, DN150,  
DN200, DN250, DN 300

## APPLICATIONS

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Downstream pressure control.

Protection of equipment and accessories.

Pressure compensation for uneven terrain.



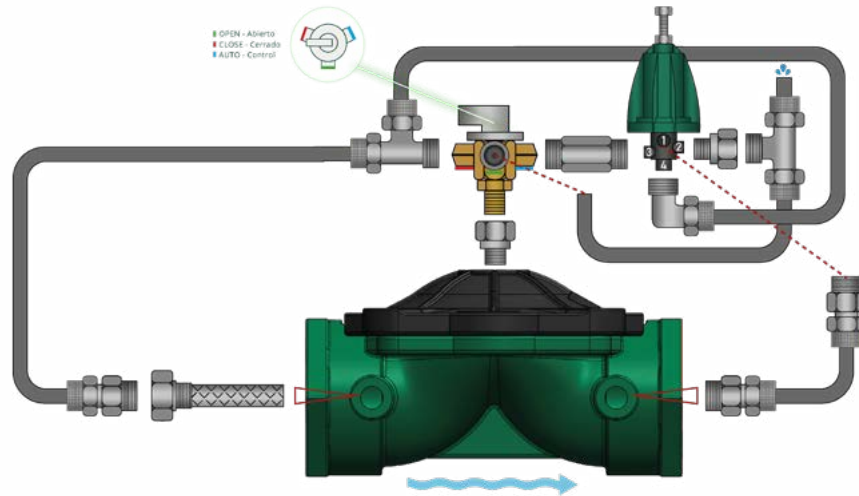
## DESCRIPTION

Hydraulically controlled valve via line pressure.

Allows manual opening and closing of the valve using the 3-way valve.

By setting the position to 'AUTO' and using a three-way pilot, the valve is able to reduce the outlet pressure and keep it constant in the face of pressure variations upstream of the valve.

If the upstream pressure drops below the pressure selected on the pilot, the valve opens fully.



# Pressure Sustaining Control Valve

## MODELS:

PLASTIC VALVES 1 ½", 2", 2 ½", 3", 4"

METAL VALVES THREADED 1 ½", 2", 2 ½", 3", 4"

METAL VALVES VICTAULIC 3", 4"

METAL VALVES FLANGED DN80, DN100, DN 125, DN150,  
DN200, DN250, DN 300

## APPLICATIONS

Upstream pressure control.

Pressure maintenance for  
filtration equipment.

Pump system protection.

Quick relief valve/  
Safety valve.

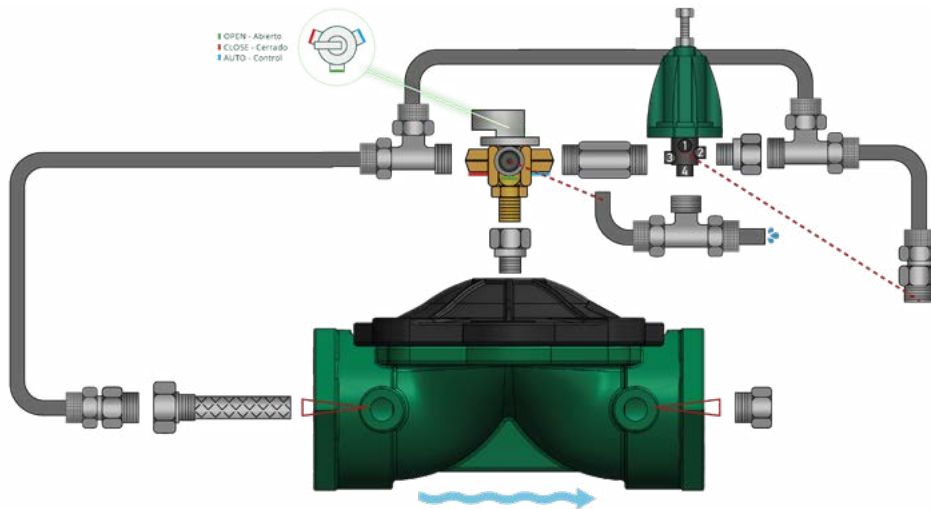


## DESCRIPTION

Hydraulically controlled valve via line pressure. Allows manual opening and closing of the valve using the 3-way valve. By setting this to the "AUTO" position, the valve enters regulation mode using the 3-way pilot.

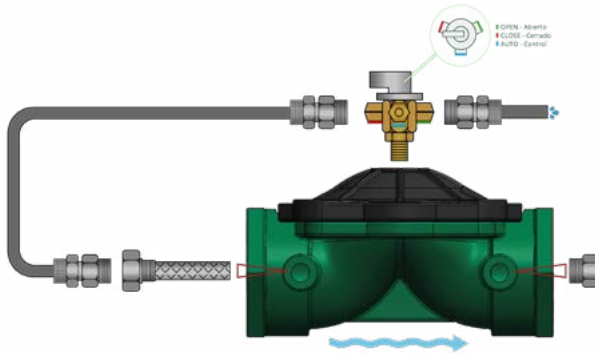
In regulation mode, the regulator pilot maintains the inlet pressure at the set value. If the upstream pressure is lower than that set on the pilot, the valve will close completely.

It can also be used as a relief valve.

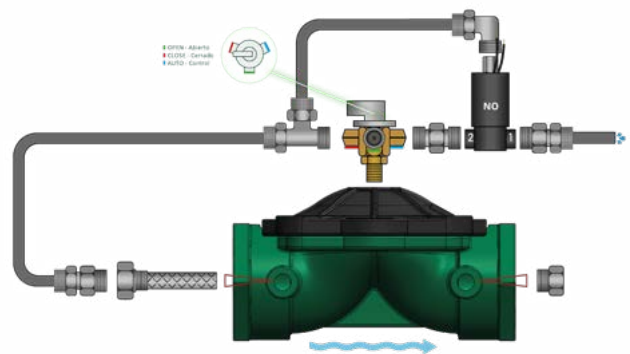


# Control Kits

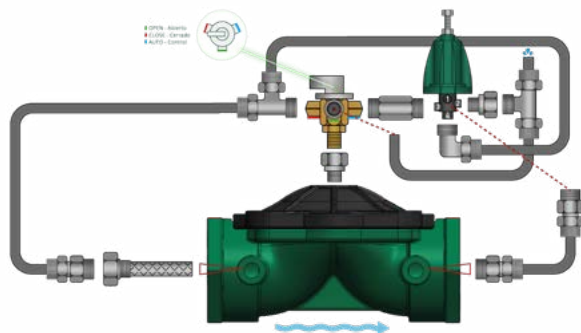
We have a wide variety of applications where our valves can be used, safety valves, pressure regulating valves, quick relief valves, float valves and pressure sustainer. RIS Valves has a complete range of components for the assembly of these applications: Regulator Pilots, Latch Solenoids, 24V Solenoids, 3-way valves, hydraulic fitting.



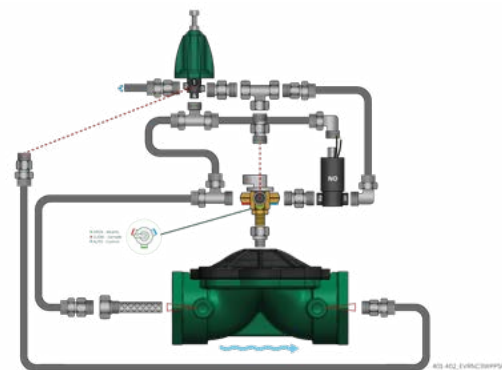
MANUAL CONTROL



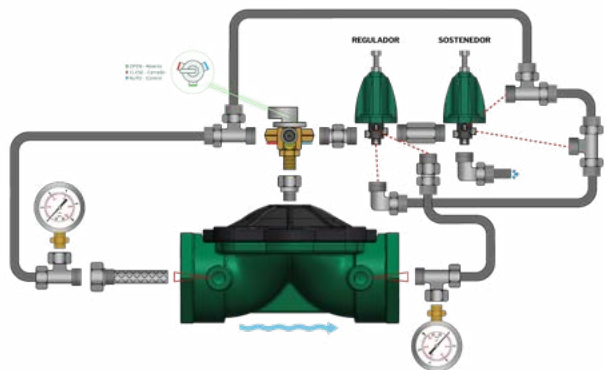
ELECTRIC CONTROL N.C. VALVE + MANUAL CONTROL



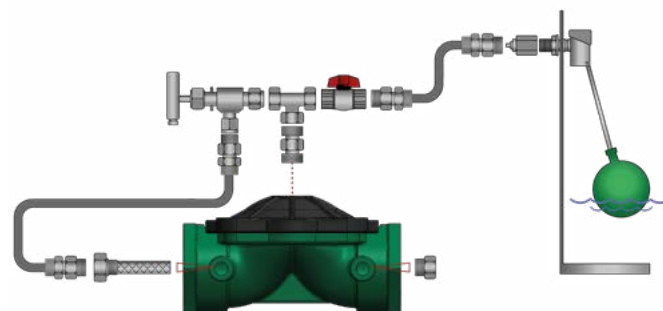
PRESSURE REDUCING CONTROL VALVE



PRESSURE REDUCING WITH ELECTRIC CONTROL VALVE



PRESSURE REDUCING AND SUSTAINING CONTROL VALVE



LEVEL CONTROL VALVE

# RS 1000 Solenoid Series

## MODELS:

RS1001L 3W 1/8" Latch NO

RS1002L 3W 1/8" 24V AC NO

RS1002V 3W 1/8" 24V AC NO

RS1002V 3W 1/8" 24V DC NO

Long life even in extreme conditions.

High-quality polyurethane injection. Encapsulated in nylon sheath.



| Specs                      | RS 1001 (Latch - 9V)                                        | RS1002 ( 24V)                              |
|----------------------------|-------------------------------------------------------------|--------------------------------------------|
| Connections                | 2: Camera: 1/8"<br>1: Atmosphere: 1/8"<br>P: Pressure: 1/8" |                                            |
| Functions                  | Latch - NO                                                  | 24V AC- NO y NC<br>24 DC - NO              |
| Internal Construction      | 3 ways                                                      |                                            |
| Hole                       | 1,5 mm                                                      |                                            |
| Max. Working Pressure      | 10 bar                                                      |                                            |
| Piston material            | Inox AISI 316                                               |                                            |
| Seal material              | EPDM                                                        |                                            |
| Weight                     | 108 gr.                                                     |                                            |
| Ambient temperature / flow | 60°C / 80°C                                                 |                                            |
| Wire section               | 2 wires - Ø 2,4 mm                                          |                                            |
| Coil resistance            | 9.1 Ω                                                       | NO: 66 Ohms. (20°C) // NC: 50 Ohms. (20°C) |
| Voltage                    | 9 - 30 VDC / 0,13 A                                         | 24 VAC / 0,13 A                            |
| Launch force - retention   | > 7N                                                        |                                            |
| Connections                | 1/8" BSP                                                    |                                            |
| Protection                 | IP66. 500V/min                                              |                                            |

# RIS 392-3W

## Latch Solenoid

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### FEATURES

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The 392-3W Solenoid is a compact 3-way solenoid consisting of two main components: a solenoid and a 3-way hydraulic pilot. This solenoid latch can control valves independently or in combination with other control accessories.

This model consumes power only when it changes position, using a very short electrical pulse. This extends the life of the batteries and allows solar recharging.

The hydraulic base features a three position manual valve and includes a bracket to attach to the valve or solenoid manifold.

| Specs                                  | RS 392 Latch - 3W                                                                                              |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------|
| Connections                            | C: Camera: 1/4"<br>1: Atmosphere: 1/4"<br>P: Pressure: 1/8"                                                    |
| Operation modes (electric connections) | +Red -Black: the solenoid drains<br>+Black -Red: the solenoid pressurizes                                      |
| Work pressure range                    | 0 - 10 bar                                                                                                     |
| Base hole diameter                     | 2,0 mm                                                                                                         |
| Hole                                   | 1,6 mm                                                                                                         |
| Base flow factor                       | $K_v = 0,08 \text{ m}^3/\text{h} @ 1 \text{ bar } \Delta P$ $C_v = 0,09 \text{ GPM} @ 1 \text{ PSI } \Delta P$ |
| Voltage Range                          | 9-20 VDC                                                                                                       |
| Coil resistance                        | 6 Ohms.                                                                                                        |
| Coil Inductance                        | 15/18 mH (off/on)                                                                                              |
| Maximum ambient temperature            | 60°C                                                                                                           |
| Max. Fluid Temperature                 | 70°C                                                                                                           |

# GEM-SOL<sup>®</sup>

## Baccara Solenoid

### MODELS:

24V-AC (NC)

24V-AC (NO)

12V-DC (NC)

12V-DC (NO)

LATCH 9-12V (NC)

LATCH 9-12V (NO)

110V-AC (NC)

110V-AC (NO)

\*Different configurations in 3-way and 2-way  
in the tables on the following page.



### TECHNICAL FEATURES

**Functions:** 2 wires,  
3 ways, NC and NO  
Core connection: 1/8"  
and 1/4" BSP and NPT

**Temperature:**

Liquid: -10°C to 80°C  
Ambient: -10°C to 50°C

**Materials:**

Manual opening: Brass screw

**Valve base:** Brass or Inox AISI 316

**Solenoid:** Inox AISI 300

**Seals:** EPDM

**IP65 Protection**

### MAXIMUM PRESSURE (Bar) 3 Way NC

| Intensity                   | Hole (mm) |     |     |     |     |     |
|-----------------------------|-----------|-----|-----|-----|-----|-----|
|                             | 0,8       | 1,2 | 1,6 | 2,0 | 2,4 | 3,0 |
| AC 8W. DC 10W               | 35        | 30  | 17  | 14  | 10  | 6   |
| AC 5,5W                     | 23        | 20  | 15  | 10  | 8   | 5,5 |
| AC 2,5W                     | 20        | 16  | 10  | 9   | 5   | 4   |
| DC 5,5W                     | 20        | 16  | 10  | 9   | 5   | 4   |
| DC 3,5W                     | 20        | 16  | 10  | 9   | 5   | 4   |
| Flow factor - KV<br>(l/min) | 0,6       | 1,1 | 1,7 | 2,5 | 3,5 | 4,5 |

### MAXIMUM PRESSURE (Bar) 2 Way NC

| Intensity                   | Hole (mm) |     |     |     |     |     |     |
|-----------------------------|-----------|-----|-----|-----|-----|-----|-----|
|                             | 0,8       | 1,2 | 1,6 | 2,0 | 2,4 | 3,0 | 4,0 |
| AC 8W. DC 10W               | 80        | 80  | 60  | 38  | 30  | 18  | 10  |
| AC 5,5W                     | 80        | 60  | 40  | 28  | 20  | 15  | 6   |
| AC 2,5W                     | 60        | 50  | 35  | 20  | 15  | 9   | 5   |
| DC 5,5W                     | 60        | 30  | 18  | 12  | 9   | 6   | 3   |
| DC 3,5W                     | 40        | 20  | 12  | 8   | 6   | 4   | 2   |
| Flow factor - KV<br>(l/min) | 0,5       | 1,1 | 1,7 | 2,5 | 3,5 | 4,5 | 5   |

### MAXIMUM PRESSURE (Bar) 3 Way NO

| Intensity                   | Hole (mm) |     |     |     |     |     |
|-----------------------------|-----------|-----|-----|-----|-----|-----|
|                             | 0,8       | 1,2 | 1,6 | 2,0 | 2,4 | 3,0 |
| AC 8W. DC 10W               | 30        | 22  | 17  | 12  | 10  | 7   |
| AC 5,5W                     | 25        | 20  | 15  | 11  | 8   | 6   |
| AC 2,5W                     | 20        | 18  | 12  | 8   | 6   | 4   |
| DC 5,5W                     | 20        | 18  | 12  | 8   | 6   | 4   |
| DC 3,5W                     | 20        | 18  | 12  | 8   | 6   | 4   |
| Flow factor - KV<br>(l/min) | 0,6       | 1   | 1,4 | 2,2 | 3,0 | 3,5 |

### MAXIMUM PRESSURE (Bar) 2 Way NO

| Intensity                   | Hole (mm) |     |     |     |     |     |
|-----------------------------|-----------|-----|-----|-----|-----|-----|
|                             | 0,8       | 1,2 | 1,6 | 2,0 | 2,4 | 3,0 |
| AC 8W. DC 10W               | 25        | 25  | 25  | 20  | 15  | 10  |
| Flow factor - KV<br>(l/min) | 0,5       | 1,1 | 1,4 | 2,5 | 3,0 | 3,5 |

# Pressure Regulating Pilots

## MODELS:

3 ways



  
**3 ways:**  
Plastic



  
**3 ways:**  
Metallic

## APPLICATIONS

Transform a hydraulic valve into a pressure reducing valve or sustaining valve by changing the connection scheme of the pilot ways.

### **PRESSURE REDUCER:**

The pilot reduces the outlet pressure to a predetermined pressure, which is set through the screw at the top.

### **PRESSURE SUSTAINER:**

The pilot opens or closes the valve up to the predetermined upstream pressure, releasing excess pressure in the pipeline.

### **REDUCER-SUPPORTER:**

At the same time.

Regulating pilots are used in hydraulic valves for upstream and downstream pressure regulation.

They can also be used as quick relief valves.

| MATERIALS      |                                  |                         |
|----------------|----------------------------------|-------------------------|
| Components     | Plastic                          | Metal                   |
| Body and cover | Glass fiber reinforced polyamide | Brass                   |
| Screw and nut  | AISI304 stainless steel          | AISI304 stainless steel |
| Spring         | AISI304 stainless steel          | AISI304 stainless steel |
| O-rings        | NBR                              | NBR                     |
| Diaphragm      | EPDM                             | Natural rubber          |
| Shaft          | AISI304 stainless steel          | AISI304 stainless steel |
| Shaft housing  | Teflon                           | Teflon                  |

| Material | Model      | PN | Regulated Max. Pressure | Connections size |
|----------|------------|----|-------------------------|------------------|
| Plastic  | ○ 10/3 bar | 10 | 3 bar                   | 1/8" BSP         |
| Plastic  | ● 10/6 bar | 10 | 6 bar                   | 1/8" BSP         |
| Plastic  | ● 10/9 bar | 10 | 9 bar                   | 1/8" BSP         |
| Brass    | 16/12 bar  | 16 | 12 bar                  | 1/8"-1/4" BSP    |





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